REMARKS

This invention describes a procedure for the coupling of the photodynamic agent chlorin e6, to the iron transport protein transferrin; in a way which preserves the biological activity of the transferrin. This reagent is then available for the light-induced killing of transferrin binding cells.

The original claims for this invention failed to mention a particular transferrin to be used. In the office communication dated 02/03/2004, the examiner found this to denote plurality in the choice of transferrin species, and therefore required the inventor to elect a particular species for this.

The original claims for this invention mentioned the use of certain other species in a:

"wherein said species is, but is not limited to, species X."

type of statement. In the office communication dated 02/03/2004, the examiner found this type of claim to also denote plurality in the choice of certain other species, and therefore required the inventor to elect a particular species for each of three other different groups of species used throughout the invention.

To address these issues, in the amendment in response to the office communication dated 02/03/2004, the claims were re-drafted to include a master process claim (claim 26), which listed all processes in general terms, so as to encompass various obvious methods and materials, which exist in the prior art, for accomplishing certain steps of the process. Subsequent new claims pertaining to the invention: claims 27-39, mention specific species of items to be used, but these claims all refer back to the master process claim, and thus exist as one possible specific method of performing the process.

In response to this, in the office communication dated 06/01/2004,the examiner found that this reply was not fully responsive, as the elected species were not formally identified, or stated on the record. The examiner did not find fault with the revised claims themselves as written, so it is assumed that these claims are satisfactory, despite that fact that many continue to include the:

"wherein said species is, but is not limited to, species X."

type of statement. The inventor assumes that this type of claim will be allowed, as long as the one particular species stated as usable, is stated as elected, on the record.

With this amendment, a new claim (claim 43), has been added, to clarify the species of transferrin used.

The four species in the office communication dated 02/03/2004, which required election were:

1.) particular transferrins, 2.) types of gels, 3.) coupling agents, and 4.) detergent agents.

By way of this amendment,

The applicant elects the transferrin of claim 26, 34, and 43 as: purified human transferrin.

The applicant elects the gel of claim 27 as: quaternary aminoethyl-sepharose (referred to as QAE sepharose).

The applicant elects the gel of claim 38 as: sulfo-propyl sepharose (referred to as SP-sepharose).

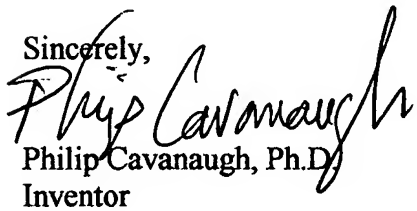
The applicant elects the coupling agent of claim 28 as: 1-Ethyl-3-[3 dimethylaminopropyl] carbodiimide hydrochloride (referred to as EDC).

The applicant elects the detergent agent of claim 29 as: 3-[(3-cholidamidopropyl) dimethylammonio]- 1-propanesulfonate (referred to as CHAPS).

Although these are the elected species, the claims in no way restrict the process to the use of these, as per the "wherein said species is, but is not limited to, species X." text used in the claims. Multiple species exist in the prior art for accomplishing certain steps of the process. Anion exchange gels using the diethyl amino ethyl (DEAE) group could perhaps be used in claim 27; cation exchange gels possessing the carboxy methyl group (CM) could be used in claim 38. In addition, multiple anion and cation exchange gels exist manufactured with different matrices such as agarose, sephadex, cellulose, acrylic or polystyrene. Any one of these could perhaps be used successfully in claims 27 or 38. In addition, multiple non-ionic or zwitterionic detergents exist which could perhaps be used in claim 29. Detergents such as octyl glucoside or MEGA-10, etc. are candidates. The coupling agent could be any one, such as cyanogen bromide, which causes the carboxyl groups, or any other groups on chlorin e6; to become covalently linked to free amino, or other groups on transferrin; while preserving the functionality of both. The transferrin used could be from any animal, or could be bioengineered. Iron free transferrin may be adequate. The process in the specification used species which proved successful, and did not explore the use of others in the prior art, which might be suitable substitutes.

The inventor wishes to thank the examiner for the review, and hopes that this amendment appropriately addresses the species election issue.

Sincerely,



Philip Cavanaugh, Ph.D.
Inventor